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EXAMINER

BROWN, VERNAL U

ART UNIT PAPER NUMBER

2635

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



### **DETAILED ACTION**

This action is responsive to communication filed on November 21, 2005.

#### ***Response to Amendment***

The examiner acknowledges the amendment of claims 1, 4, 10, 13-15, 19, and 22-24.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 10-12, 15, 19-21, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman et al. US Patent 4988981 in view of Pryor US Patent 6750848 and further in view of Starner et al. US Patent Application Publication 200200761277.

Regarding claims 1, 19, and 23-24, Zimmerman et al. teaches providing a plurality of gesturing sensors in a two-dimensional arrangement (col. 3 lines 19-30, col. 5 lines 38-40), each sensor being adapted to detect a gesturing instrument within a proximity of a sensor (col. 3 lines 25-30), each sensor having an independent detection event signal (illustrated in figure 1 with each sensor receiving a signal from the gesture instrument); determining a sensor sequence from

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a series of sensor detection events responsive to movement of a gesturing instrument within the proximity of said plurality of sensors and correlating said sensor sequence to a predetermined sequence in order to decode a command from said user (col. 3 lines 53-64). Zimmerman et al. is however silent on teaching the detected gesture is used to provide signature information and authorizing a physical security action in response to the user authentication. Pryor in an art related machine interface invention teaches detecting signature from a free-space gesture (col. 9 lines 4-29) in order to add a confirming degree of authenticity to the signature and the use of a gesture to authorize a physical security action such as opening a door is evidenced by Starner et al. (paragraph 0035, 0038) in order to provide a remote command and control interface without the use of a remote control.

It would have been obvious to one of ordinary skill in the art for the detected free space gesture to provide signature information in Zimmerman et al. as evidenced by Pryor because Zimmerman et al. suggests using a free space gesture to generate command and Pryor teaches detecting signature from a free-space gesture in order to add a confirming degree of authenticity to the signature and authorizing a physical security action in response to the user authentication allows a system or device to be controlled using gestures instead of a remote control.

Regarding claims 2 and 20, Zimmerman et al. teaches applying timing analysis to the sensor detection events (col. 3 lines 35-40).

Regarding claims 3 and 21, Zimmerman et al. teaches decoding a command from a gesture (col. 3 lines 53-64) but is silent on teaching the authorized sequence is use in authorizing a financial transaction. Pryor in an art related machine interface invention teaches detecting signature from a free-space gesture (col. 9 lines 4-29) and the detected signature is used to

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authorize a financial transaction (col. 9 lines 4-10) in order to add a degree of security to the system to ensure the authenticity of the signature.

It would have been obvious to one of ordinary skill in the art for the authorized sequence is use in authorizing a financial transaction in Zimmerman et al. as evidenced by Pryor because Zimmerman et al. suggests decoding a command from a gesture and Pryor teaches detecting signature from a free-space gesture and the detected signature is used to authorized a financial transaction in order to add a degree of security to the system to ensure the authenticity of the signature.

Regarding claim 10-11 and 15, Zimmerman et al. teaches providing a plurality of gesturing sensors in a two-dimensional arrangement (col. 3 lines 19-30, col. 5 lines 38-40), each sensor being adapted to detect a gesturing instrument within a proximity of a sensor (col. 3 lines 25-30), each sensor having an independent detection event signal (illustrated in figure 1 with each sensor receiving a signal from the gesture instrument); determining a sensor sequence from a series of sensor detection events responsive to movement of a gesturing instrument within the proximity of said plurality of sensors and correlating said sensor sequence to a predetermined sequence in order to decode a command from said user (col. 3 lines 53-64). Zimmerman et al. teaches the use of software to convert the time delay into coordinate (col. 3 lines 43-45) and the software inherently includes a computer readable medium. Zimmerman et al. is however silent on teaching the detected gesture is used to provide signature information. Pryor in an art related machine interface invention teaches detecting signature from a free-space gesture (col. 9 lines 4-29) in order to add a confirming degree of authenticity to the signature and the use of a gesture to authorize a physical security action such as opening a door is evidenced by Starner et al.

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(paragraph 0035, 0038) in order to provide a remote command and control interface without the use of a remote control.

It would have been obvious to one of ordinary skill in the art for the detected free space gesture to provide signature information in Zimmerman et al. as evidenced by Pryor because Zimmerman et al. suggests using a free space gesture to generate command and Pryor teaches detecting signature from a free-space gesture in order to add a confirming degree of authenticity to the signature and authorizing a physical security action in response to the user authentication allows a system or device to be controlled using gestures instead of a remote control.

Regarding claim 12, Zimmerman et al. teaches decoding a command from a gesture (col. 3 lines 53-64) but is silent on teaching the authorized sequence is use in authorizing a financial transaction. Pryor in an art related machine interface invention teaches detecting signature from a free-space gesture (col. 9 lines 4-29) and the detected signature is used to authorize a financial transaction (col. 9 lines 4-10) and the process for correlating the sequence is software control (col. 11 lines 58-61). One skilled in the art recognizes that software is inherently stored on a computer readable medium.

It would have been obvious to one of ordinary skill in the art for the authorized sequence is use in authorizing a financial transaction in Zimmerman et al. as evidenced by Pryor because Zimmerman et al. suggests decoding a command from a gesture and Pryor teaches detecting signature from a free-space gesture and the detected signature is used to authorized a financial transaction in order to add a degree of security to the system to ensure the authenticity of the signature.

Claim 4-7, 13-14, 16, 22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman et al. US Patent 4988981 in view of Pryor US Patent 6750848 in view of Starner et al. US Patent Application Publication 200200761277 and further in view of Pond et al. US Patent Application Publication 20040030601.

Regarding claims 4-6, 13-14, and 22, Zimmerman et al. in view of Pryor in view of Starner et al. teaches decoding a command from a gesture and authorized a physical security action of unlocking a door (see response to claim 1) and one skilled in the art further recognizes that the unlocking of a door allow a person to transport an item from a secured area but is silent on teaching physical security action of unlocking a fuel pump. Pond et al. in an art related payment method for a mobile device invention teaches the use of gestures as input in a payment system (paragraph 0084) and the system of purchase includes a gas dispenser (paragraph 0087) in order to allow a convenient method of payment at the pump.

It would have been obvious to one of ordinary skill in the art to have a sequence is used to authorize a physical security action and the physical security action comprises unlocking a door or a fuel pump in Zimmerman et al. in view of Pryor in view of Starner et al. US Patent Application 20020071277 as evidenced Pond et al. because allows the generation of control information without any physical contact and provides a convenient command and control interface.

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Regarding claims 7, 16, and 25, Zimmerman et al. teaches the use of sensors to detect move of the gesturing instrument (glove) (col. 3 lines 35-38) but is silent on teaching the use of RFID sensors to detect the gesture device. Pond et al. in an art related payment method for a mobile device invention teaches the use of an array of RFID sensors to detect the gesture of a RFID device and inherently include software for computer 1407 (paragraph 0084) in order to obtain identifying information without any direct contact.

It would have been obvious to one of ordinary skill in the art to use RFID sensors to detect the gesture device in Zimmerman et al. in view of Pryor in view of Stamer et al. as evidenced by Pond et al. in order to use a gesture known by the user only to trigger a security action.

Claims 8, 17, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman et al. US Patent 4988981 in view of Pryor US Patent 6750848 in view of Stamer et al. US Patent Application Publication 200200761277 in view of Hiroaki US Patent 6661425 and further in view of Lawrence US Patent 3580058.

Regarding claim 8, 17, and 26, Zimmerman et al. in view of Pryor teaches the use of ultrasonic sensors to detect move of the gesturing instrument (glove) (col. 3 lines 35-38) and teaches the use of software to convert the time delay into coordinate (col. 3 lines 43-45) and the software inherently include a computer readable medium. Zimmerman et al. is silent on teaching the use of an array of acoustic sensors to detect the gesturing instrument. Hiroaki in an art related sensor system teaches the use of acoustic sensors to detect gestures (col. 17 lines 29-33). The



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Use of acoustic sensors therefore provides an alternative to the use of ultrasonic sensors.

Lawrence in an art related sensor system teaches arranging acoustic sensors to produce acoustic mismatches for generating reflective pulses (col.1 lines 43-50) for indicating the acoustic characteristic of the sensors.

It would have been obvious to one of ordinary skill in the art to have an array of acoustic sensors to detect the gesturing instrument in Zimmerman et al. in view of Pryor as evidenced by Hiroaki in view of Lawrence because Zimmerman et al. in view of Pryor suggests the use of ultrasonic sensors to detect move of the gesturing instrument and Hiroaki in view of Lawrence teaches the use of reflective acoustic sensors to detect gestures. The Use of acoustic sensors therefore provides an alternative to the use of ultrasonic sensors.

Claims 9, 18, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman et al. US Patent 4988981 in view of Pryor US Patent 6750848 in view of Starnier et al. US Patent Application Publication 200200761277 and further in view Fleck et al. US Patent 6556190.

Regarding claims 9, 18, and 27, Zimmerman et al. in view of Pryor teaches the use of ultrasonic sensors to detect move of the gesturing instrument (glove) (col. 3 lines 35-38) and teaches the use of software to convert the time delay into coordinate (col. 3 lines 43-45) and the software inherently include a computer readable medium. Zimmerman et al. is silent on teaching providing an array of infrared (IR) sensors adapted to detect movement of gesturing instrument that are distinguishable by heat. Fleck et al. in an art related coordinate input device teaches the use of IR sensors that are distinguishable by heat (col. 7 lines 59-64) and therefore provides an alternating detecting means to the ultrasonic sensors.

It would have been obvious to one of ordinary skill in the art to provide an array of infrared (IR) sensors adapted to detect movement of gesturing instrument which are distinguishable by heat in Zimmerman et al. in view of Pryor teaches the use of ultrasonic sensors to detect move of the gesturing instrument and Fleck et al. teaches the use of (IR) sensors adapted to detect movement of gesturing instrument which are distinguishable by heat as an alternative detecting means to the sensors as taught by Zimmerman et al.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U. Brown whose telephone number is 571-272-3060. The examiner can normally be reached on 8:30-7:00 Monday-Thursday.

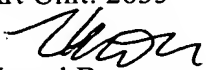
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Vernal Brown

February 7, 2006

  
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PRIMARY EXAMINER